

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims 1-12 Cancelled

Claim 13 (Previously Presented): The process according to Claim 24, wherein said nitrogen compound is selected from the group consisting of ammonia, ammonium hydroxide, hydroxylamine, alkanolamines, alkylamines and mixtures thereof.

Claim 14 (Currently Amended): The process according to Claim 24, wherein said nitrogen compound is selected from the group consisting of ammonia, ammonium hydroxide, monoethanolamine, ~~and~~ diethanolamine and mixtures thereof.

Claim 15 (Currently Amended): The process according to Claim 24, wherein ~~the~~ said at least one acid monomer ~~component~~ is neutralized with said nitrogen compound up to a neutralization level of from 10 to 100%.

Claim 16 (Previously Presented): The process according to Claim 24, wherein monomers based on acrylic acid, methacrylic acid or derivatives of these carboxylic acids are subjected to polymerization.

Claim 17 (Canceled)

Claim 18 (Previously Presented): The process of Claim 24, wherein said comonomer is vinyl acetate.

Claim 19 (Previously Presented): The process according to Claim 24, wherein at least one crosslinker based on a bi- or polyfunctional monomer is used in addition.

Claim 20 (Previously Presented): The process according to Claim 24, wherein the polymer or copolymer is heated at a temperature of from 140 to 180°C.

Claim 21 (Previously Presented): The process according to Claim 24, wherein the water-soluble or water-swellaable polymer or copolymer has a content of residual monomer of less than 50 ppm.

Claim 22 (Previously Presented): The process according to Claim 24, wherein the water-soluble or water-swellaable polymer or copolymer has a content of residual monomer of less than 30 ppm.

Claim 23 (Previously Presented): The process according to Claim 24, wherein the water-soluble or water-swellaable polymer or copolymer has a residual content of acrylamide of less than 10 ppm.

Claim 24 (Currently Amended): A process for producing a water-soluble or water-swellaable polymer or copolymer, comprising[[,]]:

providing ~~an~~ at least one acid monomer ~~or monomers~~ alone, or in combination with a at least one comonomer ~~or comonomers~~;

partially or completely neutralizing said at least one monomer ~~or monomers~~ with a at least one basic nitrogen compound ~~or compounds~~;

free-radical polymerizing said at least one monomer or monomers alone, or in combination with said at least one comonomer or comonomers to form said water-soluble or water-swellaible polymer or copolymer,

wherein said free-radical ~~polymerizing~~ polymerization is started at a temperature of from 0 to 50°C and is performed in aqueous solution at a maximum temperature of no more than 102-104°C, to provide an aqueous polymer or copolymer solution or an aqueous polymer or copolymer gel; and,

subsequent to completion of said free-radical polymerization ~~polymerizing step~~, heating said water-soluble or water-swellaible polymer or copolymer at a temperature of from 120 to 240°C;

wherein said heating is carried out for a time period between 10 minutes and 2 hours.

Claim 25 (Currently Amended): The process according to Claim 24, wherein said nitrogen compound is selected from the group consisting of ammonia, ammonium hydroxide, aliphatic monoamines, [[- and]] aliphatic polyamines, cycloaliphatic monoamines, [[- and]] cycloaliphatic polyamines, aromatic monoamines, [[- and]] aromatic polyamines, heterocyclic amines, hydroxylamine, ~~and~~ alkanolamines and mixtures thereof.

Claim 26 (Currently Amended): The process according to Claim 24, wherein said at least one monomer or monomers ~~are~~ is selected from the group consisting of acrylic acid, methacrylic acid, maleic acid, fumaric acid, itaconic acid, vinyl sulfonic acid, [[or]] acrylamidopropanesulfonic acid, and mixtures thereof.

Claim 27 (Currently Amended): The process according to Claim 24, wherein said at least one comonomer or comonomers ~~are~~ is selected from the group consisting of

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acrylonitrile, methacrylonitrile, N,N-dimethylacryl amide, vinylpyrrolidone, vinylpyridine, vinyl acetate, hydroxyl group-containing esters of polymerizable acids, ~~amino group-containing and ammonium group-containing esters and amides of polymerizable acids~~, amino group-containing esters of polymerizable acids, amino group-containing amides of polymerizable acids, ammonium group-containing esters of polymerizable acids, ammonium group-containing amides of polymerizable acids, C₁-C₁₀ alcohol esters of acrylic and/or methacrylic acid, C₁-C₁₀ alcohol esters of acrylic acid, C₁-C₁₀ alcohol esters of methacrylic acid, C₁-C₁₀ alcohol esters of a mixture of acrylic acid and methacrylic acid, [[or]] esters of acrylic and/or methacrylic acid with styrene or alkylated styrene, esters of acrylic acid with styrene, esters of acrylic acid with alkylated styrene, esters of a mixture of acrylic acid and methacrylic acid with styrene, esters of methacrylic acid with styrene, esters of methacrylic acid with alkylated styrene, esters of a mixture of acrylic acid and methacrylic acid with alkylated styrene.

Claim 28 (Canceled):

Claim 29 (Previously Presented): The process according to Claim 20, wherein said heating is carried out for a time period between 10 minutes and 1 hour.

Claim 30 (Previously Presented): The process according to Claim 24, wherein said heating is carried out for a time period between 10 minutes and 1 hour.

Claim 31 (Canceled):

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Claim 32 (Previously Presented): The process according to Claim 24, wherein said free radical polymerization is started at a temperature of from 5 to 25°C.

Claim 33 (Previously Presented): The process according to Claim 24, wherein the polymer or copolymer is heated at a temperature of 160°C or 180°C.